COMMONWEALTH OF VIRGINIA

Department of Environmental Quality
Division of Water Quality Programs
Ellen Gilinsky, Director

Subject: Guidance Memo No. 05-2009
VPDES Nutrient Limitations for Significant Discharges to the Chesapeake Bay Watershed

To: Regional Directors

From: Ellen Gilinsky, Ph.D., Director 

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Copies: Rick Weeks, Regional Water Permit Managers, CBP staff, OWPP staff, OOT Staff, OWE Staff

Summary:

The purpose of this guidance is to provide DEQ's permitting strategy for establishing nutrient limits in VPDES permits for all significant discharges to the Chesapeake Bay. This guidance replaces GM 04-2017 "Nutrient Monitoring and Maximum Annual Loads for VPDES Permitted Facilities on the DEQ Chesapeake Bay Program's List of Significant Discharges" and reflects key changes made as a result of the State Water Control Board approval of new Water Quality Standards for the Chesapeake Bay and the passage of legislation establishing the Chesapeake Bay Watershed Nutrient Credit Exchange Program. Effective upon the issuance of this guidance, VPDES permits for dischargers in the Shenandoah/Potomac, Rappahannock and Eastern Shore Basins that are on the DEQ Chesapeake Bay Program's (CBP) Significant Discharger List (SDL) should include interim monitoring requirements, final Total Nitrogen and Total Phosphorus annual loading limitations, a schedule of compliance, requirements for submittal of a Basis of Design (BOD) Report and an Interim Optimization Plan (IOP), a nutrient reopener and watershed general permit special condition as specified in this guidance. VPDES Permits for York and James River Basins discharges on the SDL should include interim monitoring requirements, requirements for submittal of a BOD Report and an IOP, a nutrient reopener clause and watershed general permit special condition.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at http://www.deq.virginia.gov/waterguidance/permits.html.

Contact Information:

Please contact Allan Brockenbrough, Office of Water Permit Programs, at (804) 698-4147 or abrockenbrough@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

VPDES Nutrient Limitations for Significant Dischargers to the Chesapeake Bay Watershed

Background and Purpose

Significant portions of the Chesapeake Bay and its tributaries are listed as impaired on Virginia's 303(d) list of impaired waters for not meeting the aquatic life use support goal, and the 2004 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report indicates that 83% of the mainstem Bay does not fully support this use support goal under Virginia's water quality assessment guidelines. Nutrient enrichment is cited as one of the primary causes for impairment. Virginia is committed to protect and restore the Chesapeake Bay and its tributaries from the harmful effects of nutrient enrichment, and through participation in the Chesapeake Bay Program and implementation of special state initiatives, Virginia maintains a firm commitment to rehabilitate its estuarine resources.

In addition to the voluntary nutrient reduction efforts that have been ongoing for over 20 years, several regulatory initiatives are underway to achieve the river basin nutrient load allocations agreed to by the Chesapeake Bay Program partners in April of 2003. Virginia's current regulatory initiatives include (1) development of a regulation to govern the inclusion of technology-based, numerical nitrogen and phosphorus limits in VPDES permits, (2) a parallel effort to update and amend the Water Quality Management Planning regulation 9 VAC 25-720 to include yearly nitrogen and phosphorus waste load allocations consistent with the *Commonwealth of Virginia Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy (January 2005)*, and (3) the adoption of new Water Quality Standards for the Chesapeake Bay and its tidal tributaries. These new Standards were adopted by the State Water Control Board in March 2005. Additional criteria to address site-specific conditions in the York and James River Basins are scheduled to be presented to the Board in June 2005. Additionally, on March 24, 2005 Governor Mark Warner signed legislation authorizing a Chesapeake Bay Watershed Nutrient Credit Exchange Program and directing DEQ to issue a watershed general permit for point source discharges of nutrients to the Chesapeake Bay and its tributaries.

With the Board's adoption of new Water Quality Standards for the Chesapeake Bay and its tidal tributaries, VPDES permit must include effluent limitations necessary to meet the criteria. The limitations are established in wasteload allocations published in the *Commonwealth of Virginia Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy (January 2005).* Until such time that the new Water Quality Standards are formally in effect, the final wasteload allocations included in the Tributary Strategy represent DEQ's best professional judgment as to the effluent limitations necessary to meet the Board's general criteria (9 VAC 25-260-20) which requires control of substances which nourish undesirable or nuisance aquatic plant life. Final wasteload allocations have not been developed for SDL permitted facilities in the York and James River Basins. Final Total Nitrogen and Total Phosphorus limitations in these two basins will be implemented upon adoption of final Tributary Strategy allocations.

The DEQ Chesapeake Bay Program (CBP) maintains a list of significant discharges of nutrients to the Chesapeake Bay and its tributaries. Nitrogen and phosphorus loads from these discharges are determined from discharge monitoring or are estimated using default values where no data exists. These data and estimates support computer modeling efforts used to evaluate current

impacts, to predict future nutrient impacts, and to assist in establishing nutrient reduction goals set forth in the Chesapeake Bay Tributary Strategies. Such data has traditionally been collected through requirements in VPDES permits, grant funding agreements, and voluntary monitoring. These efforts have resulted in the collection of a significant amount of data for many of the facilities on the CBP Significant Discharger List (SDL). However, for many others there are still data gaps that could be filled, and there exists a lack of consistency in the data and frequency with which it is collected.

To assist in establishing consistent data to support regulatory actions currently underway and to provide definitive load estimates for nutrients from affected VPDES permitted discharges, DEQ is committed to increasing the confidence level in the current nutrient loads attributed to CBP SDL discharges. To address these data issues, DEQ has made a decision to include minimum nutrient data collection and frequency requirements in all VPDES permits for facilities listed on the CBP SDL.

BOD Reports and an IOP will be required of most facilities on the SDL. The BOD report will evaluate the installation of a range of nutrient removal technologies and will enable the permittee to determine the most appropriate treatment technology for their facility and assist in decisions on upgrade schedules and nutrient trading issues that are expected to be required under the watershed group permit. The IOP will establish the nutrient treatment capabilities of the existing facility and aid in minimizing nutrient loads currently being discharged.

The following sections identify the affected discharges, establish nutrient monitoring requirements to be included in VPDES permits for these discharges, specify permit language, and provide the basis for Total N and Total P annual load limitations for each individual CBP SDL facility.

Affected Permitted Discharges

Affected permitted discharges are VPDES permitted discharges listed on the CBP SDL. The list is dynamic and changes over time. Updates to the list are maintained by CBP staff and communicated by the CBP unit manager to the Director, Office of Water Permit Programs and to the Regional Water Permit Managers. The most current list is available to the public at the following url:

http://www.deq.virginia.gov/bay/VASignificantListbyVPDES.pdf

Because the CBP SDL can change as new facilities come online, design flows increase or wastewater characteristics change, regional office staff should initiate contact with central office (CBP) staff for any discharge they suspect may be a significant source of nutrients. Additionally, because the facility list is closely tied to effluent concentration, regional office staff should refrain from waiving nutrient testing requirements contained in Form 2A and/or 2C.

This guidance should be applied to VPDES permit reissuances which have not yet gone to public notice. If a draft permit has received public notice with interim effluent limitations as outlined in GM 04-2017, then it may be reissued without the interim effluent limitations as long as the permit is re-noticed at the expense of the permittee. If such a permit is in the

Shenandoah/Potomac, Rappahannock or Eastern Shore Basins, it should include final limitations and a schedule of compliance.

Nutrient Monitoring Requirements and Effluent Limitations

Permits for facilities that are on the CBP SDL should, upon permit reissuance, contain a minimum level of nutrient monitoring as follows:

Parameters:

- Total Phosphorus
- Orthophosphate
- Total Nitrogen
  - Total Kjehldahl Nitrogen (as N)
  - Nitrate plus Nitrite (as N)
  - Total Nitrogen (to be derived as the sum of TKN and Nitrate plus Nitrite)

Sampling Type and Collection Frequency:

- Sample type should be consistent with the sampling requirement for BOD in the VPDES permit.
- Collection frequency should be a minimum of twice a month (2/M), no less than 7 days apart, for facilities with minor industrial or minor municipal permits, and weekly (1/W) for facilities with major industrial or major municipal permits.

Additionally, CBP SDL permits in the Shenandoah/Potomac, Rappahannock and Eastern Shore Basins should include final annual Total Nitrogen and Total Phosphorus load limitations consistent with the allocations listed in the *Commonwealth of Virginia Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy (January 2005)* and the proposed Water Quality Management Planning regulation 9 VAC 25-720. Annual load limitations should be converted from the allocations included in the Tributary Strategy and listed "to the kilogram". Do not round the figure to two significant digits or convert the previously rounded values in the draft WQMP Regulation. A schedule of compliance will also be required in these permits. The Clean Water Act and Virginia's VPDES Regulation require compliance "as soon as possible". Because most facilities will require significant upgrades to meet the new limitations, a 4-year schedule of compliance is appropriate. The 4-year schedule may be shortened on a case-by-case basis if a facility already has the equipment necessary to meet the limitation at design flow or if only a minor upgrade is required. A sample Part I.A and an example schedule of compliance are included for use in VPDES permit development. Final Total Nitrogen and Total Phosphorus limitations in the York and James River Basins will be implemented upon adoption of final Tributary Strategy allocations for those basins.

Basis of Design Report and Interim Optimization Plan

VPDES permits for all facilities on the CBP SDL which have not initiated design of improvements to meet final effluent limitations should include a special condition requiring the submittal of a BOD Report within one year of the permit effective date. For facilities with a potential to discharge a nutrient load equivalent to a municipal POTW of less than 1 MGD, the report should include an analysis of a range of treatment alternatives up to the technology

necessary to meet the wasteload allocations included in the Water Quality Management Planning Regulation. Because small incremental improvements at the larger facilities can generate significant nutrient credits for trading, these facilities should be required to evaluate treatment alternatives up to and including the limit of technology as defined by Tier 4 in the following table taken from the Chesapeake Bay Program report *Nutrient Reduction Technology Cost Estimates for Point Sources in the Chesapeake Bay Watershed (November 2002)* These concentrations **are annual averages**.

Point Source Category	Tier 1	Tier 2	Tier 3	Tier 4
Significant Municipals	TN=8.0 mg/l for those with BNR operating or planned; TN and TP for rest of facilities = 2000 conc.	TN = 8.0 mg/l TP = 1.0 mg/l or permit limit if less	TN = 4.0 mg/l TP = 0.3 mg/l or permit limit if less	TN = 3.0 mg/l TP = 0.1 mg/l
Significant Industrials	TN and TP = 2000 conc. or permit limit if less	Generally a 50% reduction from Tier 1 (or 2000 conc. or permit limits if less	Generally an 80% reduction from Tier 1 (or 2000 conc.) or permit limit if less	TN = 3.0 mg/l TP = 0.1 mg/l or permit limit if less

At a minimum, the BOD Report should include the following:

a. wastewater characterization
b. evaluation of the existing treatment facility
c. description and process flow diagrams of each alternative
d. basis of design for cost estimates
e. estimates of project's cost (total)(dated, keyed to construction cost index, escalated, etc.)
f. advantages and disadvantages of each alternative
g. individual differences, requirements, limitations
h. selection of preferred alternative for each treatment tier
i. justify selection and present tabulated comparisons
j. characteristics of treatment process performance
k. operation and maintenance expenses
l. annual expense requirements (tabulation of annual operation, maintenance, personnel, debt obligation)

Due to differences in various waste characteristics and/or other unique process constraints (e.g. high levels of refractory organic nitrogen in some industrial wastestreams), every permittee may not be able to obtain the effluent concentrations identified in the table above. In such cases, the BOD Report should identify the annual average effluent concentrations that could be obtained given the commensurate level of treatment. Although treatment tiers are defined above in terms of effluent concentrations, reductions in nutrient loads are the real goal for the CBP. Pollution prevention measures that provide an equivalent reduction in nutrient loads should be encouraged. Permittees may submit a more comprehensive Preliminary Design Report to fulfill this requirement as long as it includes the elements outlined above.

Additionally, within one year of the permit effective date all CBP SDL dischargers which are not currently meeting final wasteload allocations for Total N and Total P should be required to submit a separate plan to address operational strategies and/or process modifications that may be

utilized to optimize nutrient removal with the existing facility. DEQ is committed to providing assistance in the development of the IOP. The Water Quality Division's Office of Operator Training will assist permittees who have contacted that office in establishing and adhering to the required written plan to optimize nutrient removal with the existing facility. Additionally, grant funding to offset a portion of the costs to develop the BOD Report and the IOP may be provided at the discretion of the DEQ Director in accordance with the provisions of the Virginia Water Quality Improvement Act (WQIA) and its accompanying guidelines. Compliance with the requirement to submit a BOD Report and the IOP in accordance with the permit condition is not contingent upon receipt of a Technical Assistance grant under the WQIA. In addition, receipt of grant funding for this purpose does not obligate the Commonwealth to provide additional grant funding for design and construction of any nutrient removal facilities.

Permit Language

Reopener Clause - Upon reissuance, VPDES permits for all facilities in the Chesapeake Bay watershed should contain the following reopener clause:

> *Chesapeake Bay Nutrients Reopener*
> *This permit may be modified or, alternatively, revoked and reissued to incorporate new or alternative nutrient limitations and/or monitoring requirements should the State Water Control Board adopt new nutrient standards for the waterbody receiving the discharge, including the Chesapeake Bay or its tributaries, or if a future water quality regulation or statute requires new or alternative nutrient control.*

General Permit Clause - VPDES permits for all facilities on the SDL should include the following special condition.

> *General Permit Controls*
> *Upon the permittee obtaining coverage under a watershed general permit issued for the control of Total Nitrogen and Total Phosphorus loadings to the Chesapeake Bay or its tidal tributaries, the Total Nitrogen and Total Phosphorus annual load limitations and any associated monitoring requirements and schedule(s) of compliance contained herein shall be waived in lieu of those in the general permit*. **(For discharges with Total P limitation based on a Nutrient Enriched Waters designation, the following sentence should be added as appropriate – see note below)** *Upon the effective date of the permittee's watershed general permit Total Phosphorus limitation, the monthly average and weekly* **(choose one** *average* **or** *maximum***)** *Total Phosphorus limitations contained herein are also waived.*
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> **Note**: The second sentence above is only applicable to limits based on a Nutrient Enriched Waters designation. It is not applicable to any limitations required under a Special Standards designation (9 VAC 25-260-310) (e.g. Policy for the Potomac Embayments, Occoquan Watershed Policy, Chickahominy watershed above Walker's Dam, etc.) or any other more stringent limitations necessary to maintain local water quality.

Nutrient Reporting Condition - All reissued permits on the CBP SDL should contain the following special condition. See attachment for example effluent limitations page.

Nutrient Reporting Calculations

For each calendar month, the DMR shall show the total monthly load (kg) and the cumulative load for the calendar year-to-date (kg), calculated in accordance with the following formulae.

$ML = ML_{avg} * d$

where:

ML = total monthly load in kg ***(Parameter Codes 791 and 793)***
ML_{avg} = *monthly average load as reported on DMR (kg/d)*
d = number of discharge days in the calendar month

$AL\text{-}YTD = \Sigma_{(Jan\text{-}current\ month)} ML$

where:

AL-YTD =calendar year-to-date annual load in kg ***(Parameter Codes 805 and 806)***

$AL = \Sigma_{(Jan\text{-}Dec)} ML$

where:

AL = calendar year annual load in kg/yr ***(Parameter Codes 792 and 794)***

Basis of Design Report and Interim Optimization Plan - VPDES permits for all SDL facilities which have not initiated design of improvements to meet the final wasteload allocations should contain the following special condition requiring submittal of a BOD Report.

Basis of Design Report for Nutrient Removal
Within one year of the effective date of this permit, a Basis of Design Report addressing the construction and operation of a range of nutrient removal technologies up to and including **[choose one** - *the limit of technology* **(for potential loads equivalent to a municipal design capacity of 1 MGD or greater) or** *the treatment necessary to meet the wasteload allocations included in the Water Quality Management Planning Regulation* **(for loads equivalent to a municipal design capacity of less than 1 MGD)]**, *shall be submitted to the Department of Environmental Quality. Additional information on the scope and contents of a Basis of Design Report is available from DEQ staff. A more comprehensive* **(choose one** *Preliminary Engineering Report* **or** *Conceptual Engineering Report***)** *may be submitted to fulfill this requirement.*

VPDES permits for all existing SDL facilities which are not currently meeting final wasteload allocations should contain the following special condition requiring submittal of an IOP.

Interim Optimization Plan for Nutrient Removal
Within one year of the effective date of this permit, a report addressing operating alternatives and interim measures that may be taken to optimize nutrient removal with the existing facilities shall be submitted to the Department of Environmental Quality. The report shall describe alternatives considered and a plan to implement the selected interim measures.

Schedule of Compliance – All permits containing final Total N and Total P annual load limits should include a 4-year schedule of compliance unless modified to address site specific conditions.

Schedule of Compliance

The permittee shall comply with the Total Phosphorus and Total Nitrogen limitations included in Part I. A. in accordance with the following schedule of compliance.

1. Select a design engineer	*Within 18 months of the permit effective date*
2. Submit final, approvable plans and specifications	*Within 24 months of the permit effective date*
3. Submit progress reports	*By January 10th of each year*
4. Comply with effluent limitations	*Within 48 months of the permit effective date*

Within 14 days of the due date for items 1, 2, and 4 above, the permittee shall submit a report to the DEQ Regional Office indicating whether the requirement was met.

Fact Sheet Language

The following suggested Fact Sheet language is provided for use by permit writers to provide justification for the required nutrient monitoring, submittal of the BOD Report and Interim Optimization Plan, and for total nitrogen and total phosphorus limitations in VPDES permits for affected permitted discharges:

Nutrient Reporting, Basis of Design Report and Interim Optimization Plan Rationale*: Significant portions of the Chesapeake Bay and its tributaries are listed as impaired on Virginia's 303(d) list of impaired waters for not meeting the aquatic life use support goal, and the 2004 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report indicates that 83% of the mainstem Bay does not fully support this use support goal under Virginia's water quality assessment guidelines. Nutrient enrichment is cited as one of the primary causes for impairment.*

(For facilities with final annual load limits) - *Guidance Memorandum 05-2009 implements DEQ's best professional judgment decision to limit nutrient loadings from facilities listed on the Chesapeake Bay Program Significant Discharger List. Guidance Memorandum 05-2009 provides the basis for this decision and specifies the procedure for determining annual effluent limitations for these parameters for each affected facility. The guidance memorandum also establishes that dischargers be required to: monitor and report effluent nutrient loads; submit a Basis of Design Report to construct and operate a range of nutrient removal technologies; and submit an Interim Optimization Plan for the removal of nutrients with the existing facility.*

(For facilities without final annual load limits) - *Guidance Memorandum 05-2009 implements DEQ's best professional judgment decision to limit nutrient loadings from facilities listed on the Chesapeake Bay Program Significant Discharger List once the applicable water quality standards have been adopted and final waste load allocations are established in the Commonwealth of Virginia, Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy. The guidance memorandum establishes that, until such time, dischargers be required to: monitor and report effluent nutrient loads; submit a Basis of Design Report to construct and operate a range of nutrient removal technologies; and submit an Interim Optimization Plan for the removal of nutrients with the existing facility. Guidance Memorandum 05-2009 provides the basis for this decision and specifies the monitoring and reporting requirements as well as special conditions to be included in each affected permit*

Fact Sheet language for the reopener clause and schedule of compliance are included in the VPDES Permit Manual. Fact Sheet language for the General Permit Clause is as follows:

General Permit Clause
Rationale*: The Virginia General Assembly, in their 2005 session, enacted a new Article 4.02 (Chesapeake Bay Watershed Nutrient Credit Exchange Program) to the Code of Virginia to address nutrient loads to the Bay. Section 62.1-44.19:14 of the law requires the development of a watershed general permit that authorizes point source discharges of total nitrogen and total phosphorus and provides for the control of those nutrients in lieu of the individual VPDES permits, unless the individual permits contain more restrictive limits that are necessary to protect local water quality. That section of the law also sets forth various items to be contained within the general permit. Section 62.1-44.19:15 sets forth the requirements for new and expanded dischargers which are captured by the requirements of the law.*

Information Clearinghouse and Operator Assistance

It is the permittee's responsibility to track and report nutrient load status toward any annual load limit. As part of development of the plan to minimize the discharge of nutrients required by the special condition in the VPDES permit, it is recommended that the permittee contact the Water Quality Division's Office of Operator Training. As resources and time allow, the Office of Operator Training will assist permittees who have contacted that office in establishing and adhering to plan of action to minimize the further discharge of nutrients.

The Office of Operator Training is developing an information clearinghouse for the purpose of promoting and assisting permittees in maximizing the nutrient removal efficiency of their existing facilities through operational control and/or other means. The Office of Operator Training will lead the technical aspects of this initiative and the Chesapeake Bay Program will lead the procedural aspects. DEQ's water permitting program will encourage, through contact by regional office permit writers, permitted facilities in the Chesapeake Bay drainage area to participate in the effort and take advantage of the information available through the clearinghouse.

Communication

Regional office staff should inform affected permittees of their status as a significant discharger, the initiatives of this guidance and the implications thereof, and should encourage consideration by the permittees to adopt proactive measures to reduce the discharge of nutrients from the affected permitted discharge.

Compliance

Compliance will be evaluated at the end of each calendar year. Facilities that did not exceed the annual effluent limitation in their VPDES permit will be considered in compliance, whereas those that exceeded the annual effluent limitation will be deemed out of compliance.

Such discharges shall be limited and monitored by the permittee as specified below: LIMITS NOTED ARE EXAMPLES

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/l*	kg/day*	mg/l*	kg/d*	mg/l*	mg/l*		
Flow (MGD) [a]	NL		NA		NA	NL	Continuous	TIR
BOD5	20	38	30	57	NA	NA	3 Days/Week	8-HC
Total Suspended Solids	30	57	45	85	NA	NA	3 Days/Week	8-HC
Ammonia	1.4	NA	1.4	NA	NA	NA	3 Days/Week	8-HC
Total Residual Chlorine (ug/l) [b] [c]	88	NA	130	NA	NA	NA	1/Day	Grab
Dissolved Oxygen	NA		NA		6.0	NA	1/Day	Grab
pH (standard units)	NA		NA		6.0	9.0	1/Day	Grab
Total Phosphorus [e]	NL	NL	NA	NA	NA	NA	2/Month	8 HC
Total Phosphorus – Monthly (kg/mo) [f]	NA	NA	NA	NA	NA	NL	1/Month	Calculated
Total Phosphorus – Year to Date (kg/yr)[f]	NA	NA	NA	NA	NA	NL	1/Month	Calculated
Total Phosphorus – Calendar Year (kg/yr)[f][g]	NA	NA	NA	NA	NA	7,513	1/Year	Calculated
Orthophosphate [e]	NL	NL	NA	NA	NA	NA	2/Month	8 HC
Total Kjeldahl Nitrogen (as N) [e]	NL	NL	NA	NA	NA	NA	2/Month	8 HC
Nitrate plus Nitrite (as N) [e]	NL	NL	NA	NA	NA	NA	2/Month	8 HC
Total Nitrogen [d, e]	NL	NL	NA	NA	NA	NA	2/Month	Calculated
Total Nitrogen – Monthly(kg/mo) [f]	NA	NA	NA	NA	NA	NL	1/Month	Calculated
Total Nitrogen – Year to Date (kg/yr)[f]	NA	NA	NA	NA	NA	NL	1/Month	Calculated
Total Nitrogen – Calendar Year (kg/yr)[f][g]	NA	NA	NA	NA	NA	107,513	1/Year	Calculated

* = unless otherwise noted NL = No limitation, monitoring required. NA = Not applicable TIRE = Totalizing, indicating and recording equipment
[a] The design flow of this treatment facility is MGD. See Part I.__.__. for additional flow requirements. (REFERENCE THE 95% FLOW CONDITION)
[b] See Part I.B for additional chlorine monitoring instructions.
[c] See Parts I.__.a. and I.__.b. for quantification levels and reporting requirements, respectively.
[d] Total Nitrogen, which is the sum of Total Kjeldahl Nitrogen and Nitrates plus Nitrites, shall be derived from the results of those tests.
[e] 2/Month = two samples taken during the calendar month, no less than 7 days apart.
[f] See Part I.__for nutrient reporting requirements
[g] Effluent monitoring and reporting required upon effective date of permit. See Part I.__.___ for schedule of compliance for effluent limitations.
[h] There shall be no discharge of floating solids or visible foam in other than trace amounts.